Network Working Group
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IEN: 93

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Obsoletes: 750,
739, 604, 503, 433, 349

ASSIGNED NUMBERS

This Network Working Group Request for Comments documents the currently assigned values from several series of numbers used in network protocol implementations. This RFC will be updated periodically, and in any case current information can be obtained from Jon Postel. The assignment of numbers is also handled by Jon. If you are developing a protocol or application that will require the use of a link, socket, etc. please contact Jon to receive a number assignment.

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Most of the protocols mentioned here are documented in the RFC series of notes. The more prominent and more generally used are documented in the Protocol Handbook [1] prepared by the Network Information Center (NIC). In the lists that follow a bracketed number, e.g. [1], off to the right of the page indicates a reference for the listed protocol.

ASSIGNED LINK NUMBERS

The word "link" here refers to a field in the original ARPANET Host/IMP interface leader. The link was originally defined as an 8 bit field. Some time after the ARPANET Host-to-Host (AHHP) protocol was defined and, by now, some time ago the definition of this field was changed to "Message-ID" and the length to 12 bits. The name link now refers to the high order 8 bits of this 12 bit message-id field. The low order 4 bits of the message-id field are to be zero unless specifically specified otherwise for the particular protocol used on that link. The Host/IMP interface is defined in BBN report 1822 [2].

Link Assignments:

Decimal	Octal	Description	References
0	0	AHHP Control Messages	[1,3]
1	1	Reserved	
2-71	2-107	AHHP Regular Messages	[1,3]
72-151	110-227	Reserved	
152	230	PARC Universal Protocol	
153	231	TIP Status Reporting	
154	232	TIP Accounting	
155-158	233-236	Internet Protocol	[35,36,42,43,44]
159-191	237-277	Measurements	[28]
192-195	300-303	Message Switching Protocol	[4,5]
196-255	304-377	Experimental Protocols	
224-255	340-377	NVP	[1,39]

ASSIGNED SOCKET NUMBERS

Sockets are used in the AHHP [1,3] to name the ends of logical connections which carry long term conversations. For the purpose of providing services to all callers an Initial Connection Procedure ICP [1,34] is used between the user process and the server process. This list specifies the socket used by the server process as its contact socket.

Socket Assignments:

General Assignments:

Decimal	Octal	Description
0-63	0-77	Network Wide Standard Function
64-127	100-177	Hosts Specific Functions
128-223	200-337	Reserved for Future Use
224-255	340-377	Any Experimental Function

Specific Assignments:

Network Standard Functions

Decimal	Octal	Description	References
1	1	Old Telnet	[6]
3	3	Old File Transfer	[7,8,9]
5	5	Remote Job Entry	[1,10]
7	7	Echo	[11]
9	11	Discard	[12]
11	13	Who is on or SYSTAT	
13	15	Date and Time	
15	17	Who is up or NETSTAT	
17	21	Short Text Message	
19	23	Character generator or TTYTST	[13]
21	25	New File Transfer	[1,14,15]
23	27	New Telnet	[1,16,17]
25	31	Distributed Programming System	[18,19]
27	33	NSW User System w/COMPASS FE	[20]
29	35	MSG-3 ICP	[21]
31	37	MSG-3 Authentication	[21]
33	41	DPS ICP	[18,19]
35	43	IO Station Spooler	
37	45	Time Server	[1,22]
39	47	NSW User System w/SRI FE	[20]

41	51	Graphics	[1,26]
42-63	52-77	unassigned	

Host Specific Functions

Decimal	Octal	Description	References
65	101	Speech Data Base at LL-TX-2	[23]
67	103	Datacomputer at CCA	[24]
69	105	CPYNET	
71	107	NETRJS (EBCDIC) at UCLA-CCN	[1,25]
73	111	NETRJS (ASCII-68) at UCLA-CCN	[1,25]
75	113	NETRJS (ASCII-63) at UCLA-CCN	[1,25]
77	115	any private RJE server	
79	117	Name or Finger	[1,40]
81	121	Network BSYS	
83	123	MIT ML Device	
85	125	MIT ML Device	
86-94	126-136	unassigned	
95	137	SUPDUP	[33]
97	141	Datacomputer Status	
98-127	142-136	unassigned	

Reserved for Future Use

Decimal	Octal	Description	References
128-223	200-337	reserved	

Experimental Functions

Decimal	Octal	Description	References
224-231	340-347	unassigned	
232-237	350-355	Authorized Mailer at BBN	
239	357	unassigned	
241	361	NCP Measurement	[27,28]
243	363	Survey Measurement	[28,29,30]
245	365	LINK	[31]
247	367	TIPSRV	
249-255	371-377	RSEXEC	[31,32]

ASSIGNED NETWORK NUMBERS

This list of network numbers is used in the internetwork protocols now under development, the field is 8 bits in size.

Assigned Network Numbers

Decimal	Octal	Name	Network	References
0	0		Reserved	
1	1	BBN-PR	BBN Packet Radio Network	
2	2	SF-PR-1	SF Bay Area Packet Radio Network (1)	
3	3	BBN-RCC	BBN RCC Network	
4	4	SATNET	Atlantic Satellite Network	
5	5	SILL-PR	Ft. Sill Packet Radio Network	
6	6	SF-PR-2	SF Bay Area Packet Radio Network (2)	
7	7	CHAOS	CHAOS Network	
8	10	BBN-SAT-TEST	BBN SATNET Test Network	
9	11	BRAGG-PR	Ft. Bragg Packet Radio Network	
10	12	ARPANET	ARPANET	[1,2]
11	13	UCLNET	University College London Network	
12	14	CYCLADES	CYCLADES	
13	15	NPLNET	National Physical Laboratory	
14	16	TELENET	TELENET	
15	17	EPSS	British Post Office EPSS	
16	20	DATAPAC	DATAPAC	
17	21	TRANSPAC	TRANSPAC	
18	22	LCSNET	LCS Network	[37,38]
19	23	TYMNET	TYMNET	
20	24	DC-PR	Washington D.C. Packet Radio Network	
21	25	EDN	DCEC EDN	
22	26	DIALNET	DIALNET	[47,48]
23	27	MITREK	MITREK Cable Network	
24	30	BBN-LOCAL	BBN Local Network	
25	31	RSRE-PPSN	RSRE / PPSN	
26-254	32-376		Unassigned	
255	377		Reserved	

ASSIGNED INTERNET MESSAGE VERSIONS

In the internetwork protocols there is a field to identify the version of the internetwork general protocol. This field is 4 bits in size.

Assigned Internet Message Versions

Decimal	Octal	Version	References
0	0	March 1977 version	[35]
1	1	January 1978 version	[36]
2	2	February 1978 version A	[42]
3	3	February 1978 version B	[43]
4	4	February 1979 version 4	[44]
5-14	5-16	Unassigned	
15	17	Reserved	

ASSIGNED INTERNET PROTOCOL NUMBERS

In the internet protocol (IN) [44] there is a field to identify the the next level protocol. This field is 8 bits in size. This field is called Protocol in the IN header.

Assigned Internet Protocol Numbers

Decimal	Octal	Protocol Numbers	References
0	0	Reserved	
1	1	raw internet datagrams	[44]
2	2	TCP-3	[36]
3	3	Gateway-to-Gateway	[49]
4	4	Gateway Monitoring Message	[41]
5	5	TCP-3.1	[45]
6	6	TCP-4	[46]
7	7	UCL	
8	10	DSP	[37,38]
9	11	Secure	
10	12	TCP-2	[35]
11-12	13-14	Unassigned	
13	15	Pluribus	
14	16	Telenet	
15	17	XNET	
16	20	Chaos	
17	21	UDP	[50]
18	22	Multiplexing	[51]
19-254	23-376	Unassigned	
255	377	Reserved	

ASSIGNED INTERNET MESSAGE TYPES

In the March 1977 internetwork protocol [35] there is a field to identify the type of the message. This field is 4 bits in size.

Assigned Internet Message Types

Decimal	Octal	Type	References
0	0	Raw Internet Packet	
1	1	TCP-2	[35]
2	2	Secure	
3	3	Gateway	
4	4	Measurement	
5	5	DSP	[37,38]
6	6	UCL	
7-12	7-14	Reserved	
13	15	Pluribus	
14	16	Telenet	
15	17	Xnet	

REFERENCES

[1] Feinler, E. and J. Postel, eds., "ARPANET Protocol Handbook," NIC 7104, for the Defense Communications Agency by SRI International, Menlo Park, California, Revised January 1978.

[2] BBN, "Specifications for the Interconnection of a Host and an IMP," Report 1822, Bolt Beranek and Newman, Cambridge, Massachusetts, January 1976.

[3] McKenzie,A. "Host/Host Protocol for the ARPA Network," NIC 8246, January 1972. Also in [1].

[4] Walden, D. " A System for Interprocess Communication in a Resource Sharing Network," RFC 62, NIC 4962, 3 August 1970. Also published in Communications of the ACM, volume 15, number 4, April 1972.

[5] Bressler, B. "A Proposed Experiment with a Message Switching Protocol," RFC 333, NIC 9926, 15 May 72.

[6] Postel, J. "Telnet Protocol," RFC 318, NIC 9348, 3 April 1972.

[7] McKenzie, A. "File Transfer Protocol," RFC 454, NIC 14333, 16 February 1973.

[8] Clements, R. "FTPSRV -- Extensions for Tenex Paged Files," RFC 683, NIC 32251, 3 April 1975. Also in [1].

[9] Harvey, B. "One More Try on the FTP," RFC 691, NIC 32700, 6 June 1975.

[10] Bressler, B. "Remote Job Entry Protocol," RFC 407, NIC 12112, 16 October 72. Also in [1].

[11] Postel, J. "Echo Process," RFC 347, NIC 10426, 30 May 1972.

[12] Postel, J. "Discard Process," RFC 348, NIC 10427, 30 May 1972.

[13] Postel, J. "Character Generator Process," RFC 429, NIC 13281, 12 December 1972.

[14] Neigus, N. "File Transfer Protocol," RFC 542, NIC 17759, 12 July 1973. Also in [1].

[15] Postel, J. "Revised FTP Reply Codes," RFC 640, NIC 30843, 5 June 1974. Also in [1].

[16] McKenzie, A. "Telnet Protocol Specification," NIC 18639, August 1973. Also in [1].

[17] McKenzie, A. "Telnet Option Specification," NIC 18640, August 1973. Also in [1].

[18] White, J. "A High Level Framework for Network-Based Resource Sharing," RFC 707, NIC 34263, 14 January 1976. Also in NCC Proceedings, AFIPS, June 1976.

[19] White, J. "Elements of a Distributed Programming System," RFC 708, NIC 34353, 28 January 1976.

[20] COMPASS. "Semi-Annual Technical Report," CADD-7603-0411, Massachusetts Computer Associates, 4 March 1976. Also as, "National Software Works, Status Report No. 1," RADC-TR-76-276, Volume 1, September 1976. And COMPASS. "Second Semi-Annual Report," CADD-7608-1611, Massachusetts Computer Associates, 16 August 1976.

[21] NSW Protocol Committee, "MSG: The Interprocess Communication Facility for the National Software Works," CADD-7612-2411, Massachusetts Computer Associates, BBN 3237, Bolt Beranek and Newman, Revised 24 December 1976.

[22] Harrenstien, K. "Time Server," RFC 738, NIC 42218, 31 October 1977. Also in [1].

[23] Armenti, A., D. Hall, and A. Stone. "Lincoln Speech Data Facility," SUR Note 37, NIC 10917, 14 July 1972.

[24] CCA, "Datacomputer Version 1 User Manual," Computer Corporation of America, August 1975.

[25] Braden, R. "NETRJS Protocol," RFC 740, NIC 42423, 22 November 1977. Also in [1].

[26] Sproull, R, and E. Thomas. "A Networks Graphics Protocol," NIC 24308, 16 August 1974. Also in [1].

[27] Cerf, V., "NCP Statistics," RFC 388, NIC 11360, 23 August 1972.

[28] Cerf, V., "Formation of a Network Measurement Group (NMG)," RFC 323, NIC 9630, 23 March 1972.

[29] Bhushan, A., "A Report on the Survey Project," RFC 530, NIC 17375, 22 June 1973.

[30] Cantor, D., "Storing Network Survey Data at the Datacomputer," RFC 565, NIC 18777, 28 August 1973.

[31] Bressler, R., "Inter-Entity Communication -- An Experiment," RFC 441, NIC 13773, 19 January 1973.

[32] Thomas, R. "A Resource Sharing Executive for the ARPANET," AFIPS Conference Proceedings, 42:155-163, NCC, 1973.

[33] Crispin, M. "SUPDUP Protocol," RFC 734, NIC 41953, 7 October 1977. Also in [1].

[34] Postel, J. "Official Initial Connection Protocol," NIC 7101, 11 June 1971. Also in [1].

[35] Cerf, V. "Specification of Internet Transmission Control Program -- TCP (version 2)," March 1977.

[36] Cerf, V. and J. Postel, "Specification of Internetwork Transmission Control Program -- TCP Version 3," USC-Information Sciences Institute, January 1978.

[37] Reed, D. "Protocols for the LCS Network," Local Network Note 3, Laboratory for Computer Science, MIT, 29 November 1976.

[38] Clark, D. "Revision of DSP Specification," Local Network Note 9, Laboratory for Computer Science, MIT, 17 June 1977.

[39] Cohen, D. "Specifications for the Network Voice Protocol (NVP)," NSC Note 68, 29 January 1976. Also as USC-Information Sciences Institute RR-75-39, March 1976, and as RFC 741, NIC 42444, 22 November 1977. Also in [1].

[40] Harrenstien, K. "Name/Finger," RFC 742, NIC 42758, 30 December 1977. Also in [1].

[41] Cole, J. "Gateway Monitoring Messages," BBN, 1 February 1978.

[42] Postel, J. "Draft Internetwork Protocol Specification -- Version 2," USC-Information Sciences Institute, February 1978.

[43] Cerf, V. "A Proposed New Internet Header Format," Advanced Research Projects Agency, IEN 26, 14 February 1978.

[44] Postel, J. "Internet Datagram Protocol -- Version 4," IEN-80, USC-Information Sciences Institute, February 1979.

[45] Cerf, V. "A Proposal for TCP Version 3.1 Header Format," Advanced Research Projects Agency, IEN 26, 14 February 1978.

[46] Postel, J., "Transmission Control Protocol -- Version 4," IEN-81, USC-Information Sciences Institute, February 1979.

[47] McCarthy, J. and L. Earnest, "DIALNET," Stanford University Artificial Intelligence Laboratory, Undated.

[48] Crispin, M. and I. Zabala, "DIALNET Protocols," Stanford University Artificial Intelligence Laboratory, July 1978.

[49] Strazisar, V, and R. Perlman, "Gateway Routing, An Implementation Specification," IEN-30, Bolt Berenak and Newman, April 1978.

[50] Postel, J., "User Datagram Protocol," IEN-88, USC-Information Sciences Institute, May 1979.

[51] Cohen, D. and J. Postel, "Multiplexing Protocol," IEN-90, USC-Information Sciences Institute, May 1979.